National Institute of Environmental Health Sciences

A comment on "Economy-wide estimates of the implications of climate change: Human health"

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Abstract:

In a recent article in this journal, Francesco Bosello, Roberto Roson, and Richard Tol make the remarkable prediction that one degree of global warming will, on balance, save more than 800,000 lives annually by 2050. They introduce enormous, controversial monetary valuations of mortality and morbidity, varying with income; they then focus primarily on modeling the much smaller, indirect economic effects of the changes in health outcomes. Their calculations, large and small, are driven by the huge projected reduction in mortality-an estimate that Bosello et al. fail to substantiate. They rely on research that identifies a simple empirical relationship between temperature and mortality, but ignores the countervailing effect of human adaptation to gradual changes in average temperature. While focusing on small changes in average temperatures, they ignore the important health impacts of extreme weather events. They extrapolate the effects of small changes in average temperature far beyond the level that is apparently supported by their principal sources, and introduce arbitrary assumptions that may bias the result toward finding net health benefits from warming. (C) 2007 Elsevier B.V. All rights reserved.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Temperature

Extreme Weather Event: Drought, Flooding, Hurricanes/Cyclones

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Rural, Urban

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Infectious Disease, Morbidity/Mortality, Respiratory Effect

Infectious Disease: Vectorborne Disease

Foodborne/Waterborne Disease: Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Cost/Economic, Outcome Change Prediction

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type: ☑

format or standard characteristic of resource

Research Article

Resilience: ☑

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: ☑

time period studied

Medium-Term (10-50 years)